would accrue to him if he were found to have given false testimony; also to his freedom from interest and bias in making his assertion.

"The evidence of a plurality of witnesses is valuable in proportion to their independence of one another. Evidence of many independent witnesses goes to prove an assertion if they have means of knowing the truth, and if the assertion is consistent with experience. Otherwise, the evidence of witnesses, however many and however unanimous, has no value."

Though we hesitate to draw inferences with regard to an author who has such a ready eye for fallacies, it seems to us that the logical consequent of this chapter ought to be an essay on New Testament criticism or at least on that phase which deals with the doctrine of the resurrection of Jesus.

EDITOR.

LAWRENCE HEYWORTH MILLS.

1837-1918.

On February first despatches from London announced to American newspapers the death of one of those great Oriental scholars whose researches in difficult fields have been the glory of the nineteenth century. Lawrence Heyworth Mills, professor of Zend philology at Oxford since 1898, died at the ripe age of eighty-one years. In him science and literature lose another great figure, one of those who faithfully and courageously pursued the missionary labor of revealing the religious lore of the great, dead civilizations of the East to a West, which in its selfsufficiency always reacted but slowly and unwillingly to messages deemed by its utilitarian spirit to be of little, or at least, of questionable worth.

Though Professor Mills left for a permanent residence in Europe in 1872, he was of American birth, and we select from Dr. Carus's warm tribute to an esteemed contributor to *Open Court* and *Monist,* as found on pages 505 to 509 of volume XIII, the following salient facts.

He was born in New York in 1837 of German and Irish ancestry, long resident in colonial America. Educated for the ministry and ordained, he was active in ecclesiastical duties from 1861 to 1872 in our country and then in the Protestant Episcopal church

of the American colony in Florence, Italy, where he resided until 1877 while continuing the prosecution of those studies on gnosticism that had been begun in America. Removing to Germany in that year on the advice of his physician, he began the publication of his first and tentative edition of the Gāthas with four texts, of which three were translated, between 1879 and 1881. Thus favorably introduced to scholars, he was in 1883 urged by the great Orientalists Max Müller and James Darmesteter, and strongly encouraged to undertake the edition of what was probably the most difficult book of the *Sacred Books of the East,* the XXXIst, including as it did, the translation of the Gāthas. This was his most distinguished service to science, and it brought him to England in 1886 in pursuance of a request of Max Müller to see the work through the press. Henceforth his destinies centered about the great English university, Oxford, for the library of which he was largely instrumental in procuring in 1888 what has been called one of the "most precious gifts ever given it," the oldest manuscript of the Yasna, a present from a distinguished High Priest of the Parsis, a scholar renowned for his five-volume dictionary of the Pahlavi tongue. The Clarendon Press expressed its appreciation in a *de luxe* edition of the manuscript, which is the equal of any specimen of bookmaking produced in the nineteenth century. Spurred on by his first success, Dr. Mills was indefatigable in his efforts to obtain by purchase or gift the valuable manuscripts, or to obtain "diplomatically exact" copies of those he could not acquire, all for the ambitious end of seeing the Bodleian in possession of the finest collection of Parsi manuscripts in Europe.

Dr. Mills's mastery of languages was astounding, nor was he satisfied with a superb mastery of Iranic dialects, but to demonstrate the near relationship of Parsi to Sanscrit he deliberately and successfully translated a large portion of the Parsi sacred books into that difficult and ancient tongue. He was ever busy in learned societies and their publications with tongue and pen furthering the knowledge of his beloved science, and the Open Court Publishing Company has had the esteemed pleasure of printing a number of his volumes, such as the second and enlarged edition in 1900 of the *Gāthas,* originally published in 1892-4, as far as completed; *Zarathushtra, Philo, the Achaemenids and Israel* in 1906, being the two volumes in one of his university lectures, which were published as Vol. I in 1904 and Vol. II in 1905; a further collection of university lectures in 1908 under the title *Avesta Eschatology, Compared with*

the Books of Daniel and Revelations; and finally, in 1913, *Our Own Religion in Ancient Persia.*

Another fruit of Dr. Mills's professional labors at Oxford, with which he was connected from 1898 on, is the *Dictionary of the Language of the Gāthas,* of which the first volume appeared in 1902 and the last in 1914, the fitting and final labor of a great and useful life.

CURRENT PERIODICALS.

Edward V. Huntington ("On Setting up a Definite Integral without the Use of Duhamel's Theorem," *American Mathematical Monthly,* Vol. XIV, 1917, pp. 271-275) makes a contribution of importance in the principles of the integral calculus. Consider the usual process of setting up an integral in the problem, say, of finding the total attraction P due to a thin rod of length b–a at a point O in line with the rod and at distance a from the nearer end. Suppose the linear density of the rod to be any function, $f(x)$, which is known for all values of x from a to b. Also, suppose the attraction due to a particle to be proportional to F (x) times the mass of the particle. We actually proceed somewhat as follows. First, we think of the rod as divided into small elements, dx, where $dx = (b-a)/n$, and proceed to write down the attraction due to a typical element, say, from $x=x$ to $x=x+dx$. Thus, the mass of the element is seen to be $f(x)dx$, at least approximately—and the formula would be exact if the density throughout the element were the same as at its nearer end. Hence, the attraction at the point O due to the element $kF(x)f(x)dx$, at least approximately—and the formula would be exact if all the attracting material in the element were concentrated at its nearer end. In this k is a factor of proportionality. Having thus found the attraction due to a typical single element, at least approximately, we get the total attraction, P, due to all the elements, by integrating the last expression from a to b, "and in spite of the approximation used in setting up the integral, we feel assured that this final expression for P is exact."

Now, in many text-books, notably W. F. Osgood's *Calculus* of 1907 (revised edition 1909), the process of setting up an integral as the limit of a sum is held to require, for complete rigor, the use of "Duhamel's theorem." This theorem is as follows. If $a_1, a_2, \ldots a_n$ is a set of positive infinitestimals such that